

## Russell County

### Estimated Economic Contribution of Agriculture, Food, and Food Processing Sectors 6/28/2019

Using the most recent IMPLAN data available (2017) adjusted for 2019, 18 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Russell County economy.<sup>1</sup>

These 18 sectors have a total direct output of approximately **\$224.2 million** and support **681 jobs** in Russell County. Running the model for all 18 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Russell County Economy					
Contribution Type <sup>2</sup>	Employment	% Employment	Total Value Added <sup>3</sup>	Total Value Added % of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>
Direct Effect	680.8	12.38%	\$46,774,148	11.82%	\$224,175,205
Indirect Effect	133.2	2.42%	\$10,426,709	2.63%	\$23,566,471
Induced Effect	73.7	1.34%	\$4,308,318	1.09%	\$8,915,803
<b>Total Effect</b>	<b>887.7</b>	<b>16.14%</b>	<b>\$61,509,175</b>	<b>15.54%</b>	<b>\$256,657,479</b>

As shown in the above table, agriculture, food, and food processing sectors support **888 jobs**, or **16.14%** of the entire workforce in the county.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 18 agriculture, food, and food processing sectors is approximately **\$61.5 million**, or **15.54% of the GRP**.

The following tables document the top industries affected by employment and output, as well as a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:

<https://implanhelp.zendesk.com/hc/en-us/articles/115002801513-Considerations-of-Contribution-Analysis>

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value added = labor income + indirect business taxes + other property type income.

<sup>4</sup> GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

<sup>5</sup> Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **256 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Russell County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	255.9	\$27,808,030
Other animal food manufacturing	105.6	\$129,441,485
Animal production, except cattle and poultry and eggs	89.1	\$10,197,595
Grain farming	68.5	\$23,407,934
Farm machinery and equipment manufacturing	46.3	\$17,319,876
Wholesale trade	44.7	\$7,783,894
All other crop farming	43.5	\$3,166,871
Dairy cattle and milk production	15.0	\$6,124,931
Support activities for agriculture and forestry	14.4	\$580,014
Landscape and horticultural services	14.3	\$653,623

The other animal food manufacturing sector directly contributes approximately **\$129.4 million** to the Russell County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Other animal food manufacturing	105.6	\$129,441,485
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	255.9	\$27,808,030
Grain farming	68.5	\$23,407,934
Farm machinery and equipment manufacturing	46.3	\$17,319,876
Animal production, except cattle and poultry and eggs	89.1	\$10,197,595
Wholesale trade	44.7	\$7,783,894
Dairy cattle and milk production	15.0	\$6,124,931
Petroleum refineries	0.5	\$3,272,876
Oilseed farming	3.3	\$3,210,043
All other crop farming	43.5	\$3,166,871

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Russell County economy.

<b>All Agriculture, Food, and Food Processing Sectors</b>		
<b>Sector</b>	<b>Total Employment</b>	<b>Total Output</b>
Oilseed farming	3.3	\$3,210,042.72
Grain farming	68.5	\$23,407,934.19
Vegetable and melon farming	1.2	\$240,024.72
Greenhouse, nursery, and floriculture production	2.3	\$337,561.13
All other crop farming	43.5	\$3,166,871.07
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	255.9	\$27,808,029.17
Dairy cattle and milk production	15.0	\$6,124,930.86
Poultry and egg production	0.1	\$99,302.17
Animal production, except cattle and poultry and eggs	89.1	\$10,197,594.64
Commercial logging	3.3	\$86,363.99
Commercial hunting and trapping	3.2	\$61,918.37
Support activities for agriculture and forestry	14.4	\$580,013.87
Other animal food manufacturing	105.6	\$129,441,482.54
Bread and bakery product, except frozen, manufacturing	4.3	\$481,389.82
Frozen cakes and other pastries manufacturing	0.3	\$38,629.25
Farm machinery and equipment manufacturing	46.3	\$17,319,875.72
Veterinary services	10.4	\$919,614.55
Landscape and horticultural services	14.3	\$653,623.04

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Russell County, the retail sector was omitted.